



NASA Procedural Requirements

COMPLIANCE IS MANDATORY

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Subject: Safety and Mission Assurance (SMA) Requirements for Experimental Aerospace Vehicles (EAV) w/ Change 1 (3/30/04)

Responsible Office: Office of Safety and Mission Assurance

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CHAPTER 3. Conduct SMA Process Surveillance

3.1 Center Program/Project Management and SMA Responsibilities

3.1.1 The certifying/performing Center(s) for the EAV program/project is responsible for ongoing surveillance of program/project and/or contractor assurance process implementation ([Requirement 21027](#)). Ongoing surveillance includes ensuring the adequacy of program/project and contractor SMA documents, plans, and procedures and observing, verifying, and documenting implementation of assurance processes. The certifying/performing Center SMA organization should perform this ongoing surveillance ([Requirement 30919](#)).

3.1.2 Each involved Center SMA organization shall maintain documentation of the surveillance, oversight, and independent assurance activities per paragraph 3.2 ([Requirement 21028](#)).

3.1.3 Each involved Center SMA Director shall ensure that the Associate Administrator for Safety and Mission Assurance is provided with documentation and information that demonstrates the implementation of assurance processes for all phases of the program/project ([Requirement 21029](#)).

3.1.4 The certifying/performing Center SMA Director and the program/project manager shall approve the surveillance, oversight, and independent assurance activities in the plan defined in paragraph 3.2 ([Requirement 21030](#)).

3.1.5 Prior to completing the Preliminary Design Review (PDR) or equivalent review, and in accordance with NPR 7120.5, NASA Program and Project Management Processes and Requirements, the SMA organization supporting the program/project manager shall develop a finalized SMA surveillance plan detailing SMA surveillance methods, processes, and practices ([Requirement 21031](#)).

3.2 SMA Surveillance Plan

The certifying/performing Center SMA organization shall develop a Mission Assurance Surveillance Plan that shall be presented at the PRR (see paragraph 2.4.c) ([Requirement 21032](#)). The intent of the plan is to validate that project SMA processes will address the items listed in Table 2. The plan will describe the process for SMA surveillance and will include:

- a. An overview of objectives and NASA SMA's method for conducting surveillance on the program/project.
- b. NASA SMA's method for reviewing the program/project accomplishment of the listing in paragraph 5.3. The SMA organization will accomplish the assessment of:
 - (1) Program/project SMA plan(s) development and implementation (e.g., system safety plan, quality assurance plan, test/mission plan, risk assessment/management plan, hardware/software assurance plan, independent verification and validation plan, emergency/contingency plan(s), and environmental plans).
 - (2) As-built reviews.

- (3) The adequacy of the SMA processes to cover all facets of the program.
 - (4) Risk identification, risk management, and risk tradeoffs.
 - (5) Safety and hazard risk identification/analyses and how the risks are closed/mitigated/tracked.
 - (6) Prioritization of the list of the above items as to their criticality.
 - (7) The method for reviewing SMA provisions of external interfaces (e.g., system safety working group, Space Shuttle/International Space Station program, Ground Safety Review Panel, range, international partners/participants).
 - (8) Review of demonstrated and documented compliance with applicable range safety requirements and applicable Federal, state, tribal, and international law and regulatory requirements.
- c. The scope and plan for SMA independent assessment. The plan shall include who will accomplish the independent assessment ([Requirement 30920](#)).
- d. The SMA organization's method for providing the Associate Administrator for Safety and Mission Assurance with the knowledge and understanding for approval of the SMA Flight Certification.
- e. The method for documenting the safety review processes.

3.3 SMA Surveillance Record

The mission assurance surveillance record shall be developed and maintained ([Requirement 21033](#)). The SMA organization supporting the program/project manager is responsible for recording the surveillance, oversight, and independent activities performed in support of the SMA Surveillance Plan ([Requirement 30921](#)). A summary of the mission assurance surveillance record shall be presented at the SMA PAR ([Requirement 30922](#)).

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